

SOSHNIKOV, A.A.; LEVITANUS, A.D.; KUSHNIR, M.P., inzh.

Results of testing the T-125 wheeled truck tractor. Trakt. i
spol'khozmash. no.2:2-6 F '65. (MIRA 18:4)

1. Glavnnyy konstruktor Khar'kovskogo traktornogo zavoda (for
Soshnikov). 2. Zamestitel' glavnogo konstruktora Khar'kovskogo
traktornogo zavoda (for Levitanus).

KUSHNIR, M. Ya., inzh.; KOROVIN, T.D., inzh.

Ways to decrease traumatism in mines of the Prokop'evskugol' Trust in the Kuznetsk Basin. Bezop. truda v prom. 8 no.9:4-7
S '64 (MIRA 18:1)

KUSHNIR, M.Yu.

Secretory and excretory function of the stomach in certain organic diseases of the brain. Klin. med., Moskva 30 no 11:61-62 Nov 1952. (CLML 23:5)

1. Of the Clinic of Nervous Diseases (Director -- Prof. L. Ya. Shagorodskiy), Tashkent Medical Institute.

ACC NR: AP6036040

SOURCE CODE: UR/0057/66/036/011/2075/2079

AUTHOR: Kushnir,N.A.; Lunev,V.M.; Romanov,A.A.

ORG: none

TITLE: Kinetics of the absorption of nitrogen, argon and hydrogen on granules of different absorbers cooled to liquid nitrogen temperature

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 11, 1966, 2075-2079

TOPIC TAGS: gas absorption, silica gel, zeolite, activated carbon, nitrogen, argon,, hydrogen, absorption pump

ABSTRACT: The authors have measured the absorption of N₂, Ar, and H₂ on granules of "BAU" carbon and "KSK" silica gel cooled to liquid nitrogen temperature and have compared the results with those of similar measurements by two of them (ZhTF, 35, 1666, 1965) of absorption on CaA zeolite. The measurements were made by admitting successive portions of the gas to the absorption chamber and recording the decrease of pressure with time. From the curves thus obtained, curves were calculated giving the total volume Q₀ of gas absorbed after infinite time as a function of the pressure p, the ratio Q_t/Q₀ as a function of t^{1/2} for constant p, where Q_t is the quantity of gas absorbed after time t, and the time T for which Q_T = 1/2 as a function of p. The curves of Q_t/Q₀ against t^{1/2} were nearly straight lines, bending considerably only near both ends. From this it is concluded that most of the absorption volume is

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UDC: 537.525;541.183

ACC NR: AP6036040

filled by diffusion. From the intercept of the straight portion of these curves on the Q_t/Q_0 axis, conclusions were drawn concerning the free surface (including the surface of large pores) of the absorbent. With increasing thickness of the layer of absorbent granules, the specific surface of the absorbent decreased and the half-time T increased. From the long half-times and the slow diffusion rates, it is concluded that only the outer layer of absorbent grains is effective in the low pressure operation of practical absorption pumps, and the inner layers are superfluous. The full thickness of the absorbent is effective at higher pressures, however. Orig. art. has: 4 figures.

SUB CODE: 20 SUBM DATE: 20Dec65 ORIG. REF: 003 OTH REF: 001

Card 2/2

AUTHOR: Kushnir, N.K. SOV/28-58-5-13/37

TITLE: Calculating the Stretchability Index of a Specimen When Punched with a Ball (Raschét pokazatelya rastyazhimosti obraztsa pri prodavlivanií sharikom)

PERIODICAL: Standartizatsiya, 1958, Nr 5, pp 47 - 48 (USSR)

ABSTRACT: The stretchability of textiles, rubber fabrics, etc, can be measured by determining the amount of sag (caused by punching the specimen with a ball in a rupturing machine) at the point just before rupture occurs. The sag reading is then compared with the GOST table, and the stretchability index is read off. The author demonstrates that the sag relativity curve is curvilinear, whereas the tables are compiled on a rectilinear basis. The stretchability indices recommended by the standard table do not there-

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SOV/28-58-5-13/37
Calculating the Stretchability Index of a Specimen When Punched with a Ball

fore conform with the actual deformation of the object. The author presents a mathematical analysis of the deformations and gives formulae from which the stretchability of a specimen may be calculated. He suggests that the relevant GOST standards be revised. There is 1 graph and 1 schematic diagram.

ASSOCIATION: L'vovskiy torgovo-ekonomicheskiy institut (L'vov Trade and Economics Institute)

1. Materials--Elasticity 2. Materials--Testing equipment
3. Elasticity--Indexes

Card 2/2

KUSENIR, N.K., inzh.

Flexible coal-graphite-carbon black strain gauges. Izv.vys.ucheb.
zav.; tekhn.leg.prom. no.6:86-92 '58.
(MIRA 12:4)

1. L'vovskiy torgovo-ekonomicheskiy institut.
(Strain gauges)

KVSHNIR, N.K., inzh.

- Plantagraphy of the foot during raising of the heel. Izv.vys.ucmeh.zav.;
tekh.leg.prom. no.1:97-107 '63. (MIRA 16:3)
- 1. L'vovskiy torgovo-ekonomicheskiy institut. Rekomendkovna kafedroy
tovarovedeniya promyshlennyykh tovarov.
(Foot) (Boots and shoes)

KUSHNIR, N.K., inzh.

Investigating feet deformation during compression. Izv. vys.
ucheb. zav.; tekhn. leg. prom. no.3:76-84 '63.
(MIRA 16:7)
1. L'vovskiy torgovo-ekonomicheskiy institut. Rekomendovana
kafedroy tovarovedeniya promyshlennyykh tovarov.
(Foot) (Shoe manufacture)

KUSHNIR, N.K., inzh.

Studying feet deformation during compression. Izv. vys. ucheb. zav.;
tekhn. leg. prom. no.4:93-97 '63. (MIRA 16:10)

l. L'vovskiy torgovo-ekonomicheskiy institut. Rekomendovana
kafedroy tovarovedeniya promyshlennyykh tovarov.

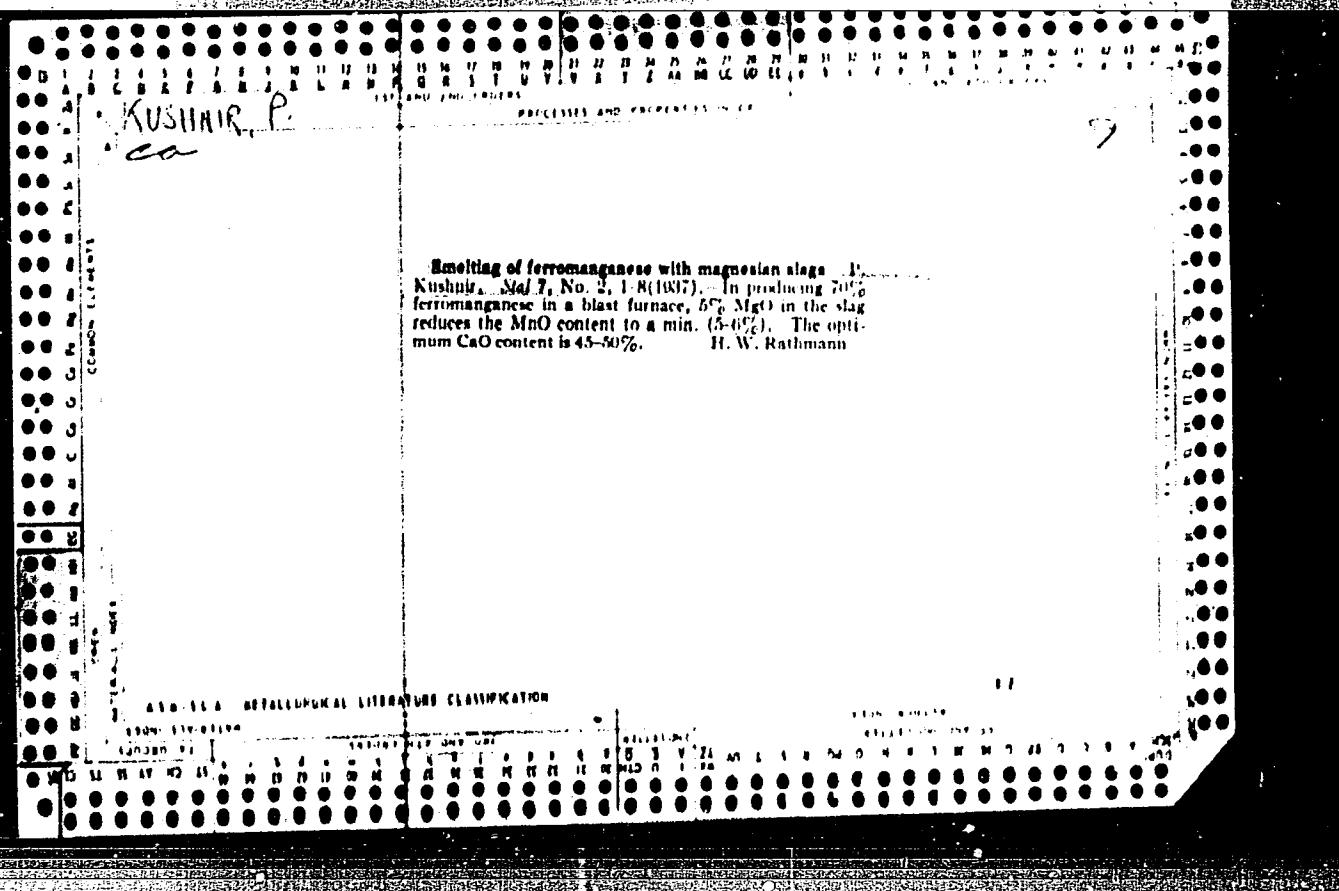
DESHKAL, P.K. [Rashidov, M.K.]; DEDKOV, V.A. [Dekhan, M.A.];
MARYSHY, K.I.; SEMENOV, V.L.

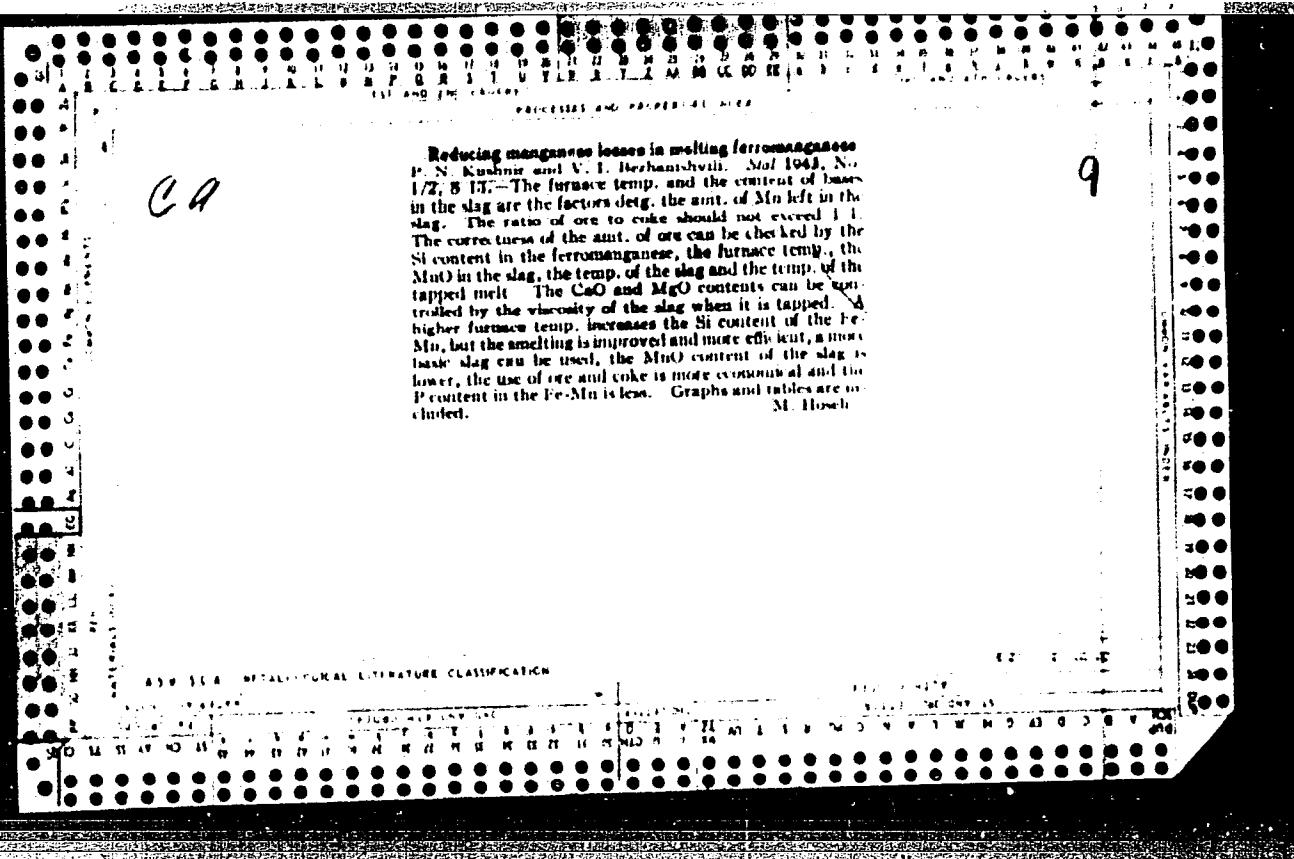
Need for a uniform all-union standard for clothing quality.
Leh. prom. no.4;27-29 O-D '65. (MIL 19:1)

KUSHNIR, N.P.; GOLUBEVA, M.B., tekhnik; VIDREVICH, Ya.V., inzh.-ekonomist;
SHAPOVAL, L.Ya., inzh.; ARISTOV, P.I., kand. tekhn. nauk;
CHARTARYAN, A.M.; SERGACHEVA, M.

Book reviews and bibliography. Tekst. prom. 25 no.5:87-94
My '65. (MIRA 18:5)

1. Starshiy inzh. nauchno-issledovatel'skoy laboratorii Kineshemskoy fabriki No.2 (for Kushnir).
2. Nauchno-issledovatel'skaya laboratoriya Kineshemskoy fabriki No.2 (for Golubeva).
3. Byuro tekhnicheskoy informatsii Darnitskogo shelkovogo kombinata (for Shapoval).
4. Nauchnyy rukovoditel' Ivanovskogo nauchno-issledovatel'skogo instituta khlopchatobumazhnay promyshlennosti (for Aristov).
5. Nachal'nik otdela tekhnicheskogo kontrolya Leninakanskoy pryadil'noy fabriki (for Chartoryan).





KUZMIN, F. ; MIKHAILOV, O.

40 years of Soviet iron metallurgy. Tr. from the Russian.

P. 962. (HUTNICKE LISTY) (Prno, Czechoslovakia) Vol. 12, no. 11, Nov. 1957

SO: Monthly Index of East European Accession (EEAI) IC Vol. 7, No. 5, May 1958

SHLOPAK, T.V., dotsent; KUSHNIR, P.K.

Use of cobalt-containing preparations in the compound treatment of primary glaucoma. Vest. oft. 76 no.1:15-20 Ja-F'63.

1. Kafedra glaznykh bolezney Stanislavskogo meditsinskogo instituta.
(GLAUCOMA) (COBALT—THERAPEUTIC USE)

KUSHNIR, R.M.

Charge exchange between potassium atoms and ions [with summary in English]. Ukr. fiz. zhur. 3 no.3:343-350 My-Je '58.
(MIRA 11:10)

1. Lvovskiy gosudarstvennyy universitet im. I. Franko.
(Potassium) (Electric charge and distribution) (Ions)

KUSHNIR, R.M.

Exchange of charges between cesium ions and atoms [with summary in English]. Ukr. fiz. zhur. 3 no.6:788-795 '58. (MIRA 12:6)

l.L'vovskiy gosudarstvennyy universitet im. Iv. Franko.
(Cesium)

KUSHNIR, R. M., Candidate Phys-Math Sci (diss) -- "Resonance overcharging of positive ions and atoms of potassium and cesium". L'vov, 1959. 8 pp (Min Higher Educ Ukr SSR, L'vov State U im Ivan Franko), 150 copies (KL, No 25, 1959, 126)

KASHNIR, R.M.

4402
24.2.20
AUTHORS: Granovskii, V.L., Lukyanov, S.Yu., Spivak, G.V. and Sirotenko, I.G.
TITLE: Report on the Second All-Union Conference on Gas Electronics
FIELD/CODE: Radiotekhnika i elektronika, 1959, Vol. 4, No. 8,
pp. 1359 - 1358 (USSR)

ABSTRACT: The conference was organized by the Ac.Sc.USSR, the Ministry of Higher Education and Moscow State University. It was opened by the chairman of the organizing committee, N.A. Leonovich, Academician. During the plenary sessions of the conference, a number of survey papers were delivered. I.A. Arslanovich read a paper on "Production of Ultrahigh Temperatures in Plasma". A survey of the existing method of measurements was given.

In the paper by V.A. Fabrikant and S.M. Frish, "Investigation of the Motion of Ions in Gases with Elementary Processes of Determining the Motion of Ions in Gases", deal with "The Role of Resonance Scattering in the Kinetics of Ionization". I.S. Skokolnikov considered the initial stages of the development of sparks (corona-leader, main channel and the final channel).

B.M. Klyverfeld gave a survey of the ionization processes of the discharges in highly rarefied gases. The mechanism of the breakdown of a high-vacuum gap was elucidated in a paper by V.L. Granovskii.

I. Tonks (USA) expounded a theory of the motion of electrons in a magnetic trap (see p. 1316 of this journal). Academician R. Rompe (Eastern Germany) described a number of experiments on non-stationary plasmas conducted by himself.

M. Stemberk (Eastern Germany) gave a generalized theory of plasma. The conference was divided into six sections. The first section was headed over by L.A. Sosin and was concerned with the elementary processes in gas discharges. The following papers were read in this section:

J.M. Foster - "Transformation of Positive Ions into Negative Ones in Rarefied Gases".

Ye. M. Pogal' with V.A. Andreev and D.V. Pilipenko - "Capture and Loss of Electrons During the Collision of Fast Atoms of Carbon and Hydrogen with the Molecules of Gases".

M.V. Fadornenko et al. - "Dissociation of Molecular Ions of Hydrogen During Collisions in Gases".

I.P. Plisk and Tashchikov - "Capture Cross-sections of Electrons in Multicharge Ions in Inert Gases".

R.M. Kuchmar et al. - "Experimental Investigation of the Resonance Reabsorption in Certain Single-atom Gases and Metal Vapours".

O.B. Farov - "Qualitative Investigation of Inelastic Collisions of Atoms".

L.M. Volkov - "Effective Excitation Cross-sections of the Spectral Lines of Potassium and Argon".

I.P. Zhdanovskii and S.M. Kuklo - "Some Results of the Investigation of the Optical Functions of the Excitation Bands of Negative Systems".

A.A. Yarol'yav and A.G. Vlasov - "Investigation of the Scattering of the Electrons in a Betatron Chamber".

The second section was presided over by B.N. Klyverfeld and was devoted to the problems of the electrical breakdown in rarified gases and in high vacuum. The following papers were read in this section:

G.I. Makar-Lisakov and Yu.A. Melitelyan - "Electrostatic Control of the Initiation of Glow-discharge Tubes" (see p. 1374 of the journal).

S.V. Petren' et al. were concerned with the breakdown in a high-voltage mercury rectifier (see p. 1378 of the journal).

I.G. Gusar - "Initiation of the Discharge in Non-uniform Fields at Low Gas Pressures" (see p. 1360 of the journal).

A.S. Soboleva and D.S. Klyverfeld - "The Discharge Phenomena Between a Point and a Plane at Gas Pressures of 10^{-5} - 1 mm Hg".

SOV/48-23-8-16/25

24(7)
AUTHORS:

Kushnir, R. M., Palyukh, B. M., Sena, L. A.

TITLE:

An Investigation of the Resonance Charge Exchange in Monatomic
Gases and Metal Vapors

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
Vol 23, Nr 8, pp 1007-1011 (USSR)

ABSTRACT:

Resonance charge exchange is an important process of interaction between ions and atoms. Knowledge of the cross section of resonance charge exchange and of the dependence of the latter on the velocity of ions is very important. In the introduction of the present paper the results of numerous investigations (Refs 1-6) are discussed. In the laboratory of L'vovskiy gosudarstvennyy universitet im. I. Franko (L'vov State University imeni I. Franko) the cross section of resonance charge exchange was measured for argon, krypton, xenon, potassium, and cesium, similar to measurements for mercury vapor made by the Leningradskiy NII. The results of all these measurements are investigated and compared with theory. Experimental measurements were accomplished by the method of retarded field, similar to methods used by the authors in previous investiga-

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An Investigation of the Resonance Charge Exchange in Monatomic Gases and
Metal Vapors SOV/48-23-8-16/25

tions (Ref 6). In the first part, the results of measurement are discussed, and the mean values of the cross sections are listed in a table. There is good agreement between experimental and theoretical results, with the exception that the experimental dependence of the cross section on the ionic velocity increases in the range of low velocity to a larger extent than the theoretical dependence. In general, it was found that the cross section decreases in a monotonic manner with increasing ionic velocity and depends on the ionization potential of the gas. There are 4 figures, 1 table, and 12 references, 8 of which are Soviet.

ASSOCIATION: L'vovskiy gos. universitet im. Iv. Franko (L'vov State University imeni Iv. Franko)

Card 2/2

82835

S/048/60/024/008/012/017
B012/B067

24.6100

X

AUTHORS: Kushnir, R. M., Buchma, I. M.

TITLE: Further Investigations Into Resonance Charge Exchange of
Positive Cesium Ions

24

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24. No. 8, pp. 986-988

TEXT: This paper presents the further investigations of resonance charge exchange of cesium ions (Ref. 1) in the direction of higher energies of from 100 to 2000 ev. The measurements were made by the method of extraction of slow ions (which have formed in the charge exchange) by an additional cylindrical electrode. Fig. 1 shows the measuring instrument which is described as well as the experiments. The cross section of the charge exchange was determined proceeding from the exponential formula for the weakening of the beam. This formula describes the linear relation between $\log I_0/I$ and p_0 . The curves for this function are drawn according to the results of measurements. Here, the values of

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Further Investigations Into Resonance Charge
Exchange of Positive Cesium Ions

S/048/60/024/008/012/017
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the cross sections of charge exchange are given. Fig. 3 shows the dependence of these values on the ion velocity (curve 1). This shows that in the region of small ion energies this curve gradually passes into the curve obtained in the paper (Ref. 1). For the purpose of comparison, the same Fig. also shows the theoretical curves drawn according to calculations by O. B. Firsov (Ref. 4) (curve 2), Yu. N. Demkov (Ref. 5) (curve 3), and L. A. Sena (Ref. 6). The theoretical curve by O. B. Firsov gives the best representation of the course of the experimental curve. L. A. Sena advised the author. There are 3 figures and 6 Soviet references.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko
(L'vov State University im. Iv. Franko)

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L 19375-63 EWT(m)/BDS AFFTC/ASD
ACCESSION NR: AR3006957

S/0058/63/000/008/A038/A038

RB

SOURCE: RZh. Fizika, Abs. 8A288

AUTHORS: Kushnir, R. M.; Palyukh, B. M.

TITLE: Use of hindered discharge to neutrons¹⁹ obtained in a sealed-off tube

CITED SOURCE: Visnyk L'viv's'k. un-tu. Ser. fiz., no. 1, 1962,
162-168

TOPIC TAGS: neutron source, low voltage, glow discharge, hindered discharge, deuterium, tritium

TRANSLATION: The possibility of using hindered glow discharge to produce sealed-off low-voltage neutron sources is discussed. The construction of one variant of such a neutron tube is described. The ion source is a system comprising an incandescent cathode and a

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ACCESSION NR: AR3006957

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planar anode (with openings to draw out the ions). Such an anode construction eliminates the sag of the target field in the region of the ion-source. The target is zirconium saturated with deuterium (or tritium) and deposited on a tungsten substrate. It is stated that with the aid of this tube a neutron flux of 2×10^5 neutron/sec was obtained (at a voltage 95 kV and a target current 90 microamperes). Replacement of the deuterium target by a tritium one increased this flux to approximately 10^7 neutron/sec.

S. Kovalenko

DATE ACQ: 06Sep63

SUB CODE: PH

ENCL: 00

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L 13446-66 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) IJP(c) JD/WW/JG

ACC NR: AP6002445

SOURCE CODE: UR/0057/65/035/012/2212/2214

AUTHOR: Kushnir, R.M.; Palyukh, B.M.; Savchik, L.S.

ORG: L'vov State University im. Ivan Franko (L'vovskiy gosudarstvennyy universitet)

TITLE: Resonance charge exchange in zinc and cadmium vapors

SOURCE: Zhurnal tehnicheskoy fiziki, v. ³⁵ ₅₅, no. ¹² ₇₁, 1965, 2212-2214

TOPIC TAGS: zinc, cadmium, charge exchange, particle cross section, gas discharge ionization cross section

ABSTRACT: The authors have measured the cross sections for resonant charge exchange between zinc ions and atoms and between cadmium ions and atoms by the retarding potential method in order to accumulate more data to test the theory of O.B.Firsov (ZhETF, 24, 2113, 1954). The ions were produced in a gas discharge between a hot tungsten cathode and a ring-shaped anode, were drawn into and traversed a 3.5 cm long collision chamber, and were collected in a Faraday cup. Measurements were made at ion energies from 40 to 400 eV (from 25 eV for cadmium). The metal vapor was in equilibrium with the solid metal, the temperature of which was measured to within 0.2°C with a copper resistance thermometer, and the pressure of the vapor was calculated from the temperature. The most significant source of error was the uncertainty in the values of the constants in the vapor pressure equation. Measurement errors did not exceed 10%. For both metals the square root of the charge exchange cross section was a linear function of the logarithm of the ion velocity. The charge exchange cross

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UDC: 539.186.3

L 13446-66

ACC NR: AP6002445

sections measured by various authors at an ion velocity of 2×10^6 cm/sec for a number of elements are plotted against the ionization potential. On this plot the present measurements fall close to a smooth curve drawn among the points representing the data for other elements. The authors thank Professor L.A. Sen for his interest and for a discussion of the results. Orig. art. has: 3 formulas, 3 figures, and 1 table.

SUB CODE: 20 SUBM DATE: 16Jun63 ORIG. REF: 013 OTH REF: 002

Card 2/2

FW

L 39742-66 EMT(1)/EMT(r)/EMT(t) LJP(c) AT/JD/GD-2
ACC'NR: AR6005196

SOURCE CODE: UR/0058/65/000/009/D007/D007

SOURCE: Ref. zh. Fizika, Abs. 9D52

AUTHORS: Kuchnir, R. M.; Kolosyuk, H. M.; Miliyanchuk, A. V.; Palyukh, D. M.

TITLE: Resonance charge exchange of cadmium ions

REF SOURCE: Rezonansna perezaryadka ioniv kadmiyu. Visnyk L'viv's'k. un-tu. Ser. fiz. L'viv, 1964, 81-82

TOPIC TAGS: cadmium, ion neutralization, charge exchange, resonance scattering, scattering cross section

TRANSLATION: The authors measured the effective cross section of the resonance charge exchange of Cd ions in the ion-energy interval 25-400 ev. The measurements were made by the method of decelerating fields and by the method of drawing out the slow ions. The experimental curve $Q = f(E)$ agrees well with the theoretical curve of Firsov.

SUB CODE: 20

Card 1/1 //5

KUSHNIR, S.

Kushnir, S. - "Determining the cause of streaks, rings and stripes in silk stockings on circular automatic machines and ways of prevention," (Collected articles on the 1947 scientific work), Nauch.-issled. in-t trikotazh. prom-sti, Moscow-Leningrad, 1949, p. 3-39

SO: U-4355, 11 August 53, (Letovis 'Zhurnal 'nykh Statey, No. 15, 1949)

KUSHNIR, S. A., LIPKOV, T. A.

Knitting

ways for eliminating some causes of defects in warp knit cloth. L. p. prom. 12 no. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953. Unclassified. ²

BUTOVICH, Vasiliy Mikhaylovich, inzh.; VILLEMON, Khenrik
Iokhanesovich, inzh.; KORZINKIN, Nikolay Sergeyevich, inzh.;
AUSHNIR, Saveliy Abramovich, kand. tekhn. nauk; LUR'YE,
Aleksandr Yevseyevich, kand. tekhn. nauk; POSTNIKOVA, K.P.,
prepodavatel'nitsa; KHOTIMSKIY, P.M., red.; FRUDNO, K.F., tekhn.
red.

[France-Russian textile dictionary] Frantsuzsko-russkii tekstil'-nyi slovar'. [By] V.M.Butovich i dr. sostaviteli. Moskva, Fiz-matgiz, 1962. 462 p.
(MIRA 15:7)

1. Moskovskiy tekstil'nyy institut (for Postnikova).
(Textile industry--Dictionaries)

SHUR, Aleksandr Iosifovich; KUSHNIR, Shimon Davidovich; KAZACHENKO,
P.K., red.; BORUNOV, N.I., tekhn. red.

[Technology of precast concrete and precast reinforced-concrete articles] Tekhnologija sbornykh zhelezobetonnykh i betonnykh izdelij. Moskva, Gos. energ. izd-vo, 1961. 215 p.
(Precast concrete) (MIRA 15:2)

ACC NR: A16009705

SPR(n)/SPR(n)-2/L/SPR(t) LPR(r) RIV/...

SOURCE CODE: UR/0181/66/008/003/0902/0994

AUTHOR: Kushnir, S. Kh.; Nikolayeva, I. G.

ORG: Institute of Physics AN UkrSSR, Kiev (Institut fiziki AN UkrSSR)

TITLE: Concerning the character of the damage produced in dislocation-free silicon when irradiated with fast neutrons.
19 18 27

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 982-984

TOPIC TAGS: neutron bombardment, silicon, crystal dislocation, radiation damage, crystal defect, crystal vacancy

ABSTRACT: In view of the high sensitivity of the method of thickness variation, based on the effect of anomalous passage of x-rays through a crystal, to the presence of different kinds of defects in a crystal, as described by O. N. Yefimov and A. M. Yelistratov (FTT v. 5, 2116, 1963 and elsewhere), the authors applied this method and observed that irradiation with a beam of fast neutrons ($\sim 10^{16}$ neut/cm²) produces in dislocation-free silicon defects of the type of vacancy clusters, accompanied by elimination of previously existing defects from the remaining region of the crystal. The tests were made on n-type silicon with resistivity ~ 7 ohm-cm and dislocation density $1-2 \text{ cm}^{-2}$. The results show that such fast-neutron irradiation did not change the ratio R_1/T_1 and left the plot of their logarithms linear (R_1 = intensity of reflected beam, T_1 = intensity of anomalously transmitted beam). The slope of the linear plot and its T_1 -axis intersection were reduced by irradiation with a beam of

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L 243-5-66

ACC NR: AP6009705

fast neutrons of 1.4×10^{10} neut/cm² at 70C by 2.56 and 2.53% respectively, showing that irradiation has caused a partial clearing of the volume of the crystals of defects which previously existed in it. The results also show that the concentration of the small defects present in the volume of the crystal has decreased. The results thus serve as a check on the applicability of the method proposed by Yefimov and Yelistratov to investigations of irradiated silicon crystals. Orig. art. has: 1 figure and 2 formulas.

SUB CODE: 20/ SUBM DATE: 01Nov65/ ORIG REF: 006/ OTH REF: 001

Card 2/2 Uv

BERKMAN, Ya.P.; KUSHNIR, S.V.

Reduction of magnesium sulphate by natural methane. Dokl.AN SSSR
104 no.3:448-451 8 '55. (MLRA 9:2)

1.L'vevskiy politeknicheskiy institut. Predstavлено akademikom
S.I.Vol'fkovichem.
(Magnesium sulfate) (Methane)

Kushnir S.V.

USSR/Chemical Technology. Chemical Products and Their Application. J-5
Mineral Salts. Oxides, Acids, Bases.

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27430

Author : Ya.P. Berman, S.V. Kushnir
Inst : Lvov Polytechnical Institute
Title : Reduction of Magnesium Sulfate with Methane.

Orig Pub: Nauch. zap. L'vovsk. politekhn. in-ta, 1956, vyp. 22, 19-28.

Abstract: See RZhKhim, 1956, 26168.

Card : 1/1

-3-

IVSINSKIR, S.V., Acad Chem Sci ---(disc) "Hydrolysis of Langbeinitite
with methylene." Kiev, 1959. 17 pp with graphs (Acad Sci UkrSSR.
Inst of Geol & Min Industr Rely. i tryd). 100 copies (KL, 22-58,93)

-24-

AUTHOR: Kushnir, S.V. SOV/80-55-1-36/44

TITLE: Reduction of Potassium Sulfate by Methane (Vosstanovleniye ser-nchislogo kaliya metanom)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 216-218 (USSR)

ABSTRACT: The Institute of General and Inorganic Chemistry of the AS UkrSSR has developed a new method of hydrothermal processing for kainite-langbeinite rocks of the Carpathian region for their conversion into concentrated potassium fertilizers. The natural gas, methane from Dashava, was used as a reducer. In order to study the behavior of potassium sulfate at high temperatures in the presence of methane a series of experiments was carried out. It turned out that the reaction between potassium sulfate and methane starts at a temperature above 800°C, and the main products of the reaction are potassium sulfide and polysulfides. The main product of methane oxidation proved to be carbon dioxide.
There are 3 tables and 6 references, 3 of which are Soviet and 3 German.

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Reduction of Potassium Sulfate by Methane

SOV/80-59-1-36/;4

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute
of General and Inorganic Chemistry of the AS UkrSSR)

SUBMITTED: April 27, 1957

Card 2/2

KUSHNIR, S.Y.; BERKMAN, Ya.P.

Hydrothermal decomposition of kainite. Ukr. khim. zhur. 26 no.4:531-
534 '60.
(MIRA 13:9)

1. L'vovskiy politekhnicheskiy institut.
(Kainite)

KUSHNIR, V.F.; SOLOPCHENKO, G.N.

Using single-circuit parametric oscillator in nuclear magnetic resonance equipment. Izv.vys.ucheb.zav.; prib. 7 no.2:53-57 '64.
(MIRA 18:4)

1. Leningradskiy elektrotekhnicheskiy institut svyazi imeni prof. M.A.Bonch-Bruyevichai Leningradskiy politek' icheskiy institut imeni Kalinina. Rekomendovana kafedroy elektreizmeritel'noy tekhniki Leningradskogo politekhnicheskogo instituta.

SOV/58-59-4-8976

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 4, p 232 (USSR)

AUTHORS: Veysig, G.S., Kushnir, V.F., Molchanov, A.P.

TITLE: Results of Observations of Shift of the Effective Center of Solar Radio Emission at a Wavelength of 3.2 cm

PERIODICAL: Solnechnyye Dannyye, 1958, Nr 1 - 2, pp 108 - 110

ABSTRACT: The authors submit curves showing the results of measurements of the shift of the effective center of solar radio emission at a wavelength of 3.2 cm for the period December 4, 1956 - July 30, 1957. The observations were carried out with the 4-m paraboloid (Main Astronomical Observatory). Measurement errors did not exceed $\pm 1'$.



Card 1/1

23939
8/035/61/000/006/022/044
A001/A101

3,1720

AUTHORS: Wang Shchukuan, Kuo Jou-hsun, Dravskikh, A.F., Kushnir, V.F., Molchanov, A.P., Tavastsherna, K.N., Wu Hsai-wei, Huang Wei-k'ung, Ch'en Fang-yun, Yang Chien

TITLE: Observations of the annular eclipse of the Sun on April 19, 1958, at the 3.2-cm wavelength

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 6, 1961, 44, abstract 6A378 ("Solnechnyye dannyye", 1960, no. 4, 69-72)

TEXT: The results of observations of the eclipse at the 3.2-cm wavelength are presented. During the eclipse the radio emission flux was measured, the position of the radio emission effective center was determined, and deviation of radio brightness distribution over the solar disk from circular symmetry was measured. As a result of processing the observational data the following results were obtained: residual flux at the instant of maximum phase amounted to 2% of the flux from the quiet Sun; the flux from sunspot group no. 188 was equal to 6% of the flux from a source located at the edge of the disk 4% (1). The brightness temperature of a sunspot group was 1.7×10^5 K; effective temperature of the quiet Sun

Card 1/2

Observations of the annular eclipse

23939

S,035/61/000/00E,022/044
A001/A101

was 21×10^{30} K. The source at the edge of the solar disk was identified by measuring the shift of the radio emission effective center, with group no. 14⁺ which was a source of strong radio emission during the preceding rotation of the Sun. Ellipticity turned out to be less than 1.1.

N. Sosolova

[Abstracter's note: Complete translation]

Card 2/2

L 19772-65 EWT(1)/EMA(b) PR-L/Peb SSD/AFWL/AS(mp)-2/RAEM(a)/RAEM(c)/RAEM(i)/
ESD(c)

ACCESSION NR: AP4037463 5/0146/64/007/002/0053/0057

AUTHOR: Kushnir, V. F.; Solopchenko, G. N.

'B

TITLE: Using a single-circuit parametric oscillator in nuclear-magnetic-resonance equipment

25

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 2, 1964, 53-57

TOPIC TAGS: oscillator, parametric oscillator, nuclear magnetic resonance

ABSTRACT: A 7-9-mc parametric oscillator designed with two P-402 transistors and one D-810 diode is briefly described. A block diagram is presented of a nuclear-magnetic-resonance outfit which used the parametric oscillator for studying the absorption of h-f energy by hydrogen nuclei in a magnetic field (uniform to 10^{-4} within a coil 12-mm in diameter and 4-mm long). The magnetic flux density varied from 0.19 to 0.243 weber/m². The following conclusions are offered: (1) To ensure superregenerative operation of a parametric oscillator,

Card 1/2

L 19772-65

ACCESSION NR: AP4037463

the modulation of the resonant frequency of its circuit (not the amplitude modulation) should be used; (2) With a superregenerative mode of operation, the possibility of measuring the carrier frequency by a digital frequency meter is retained; (3) Noisewise, the above parametric oscillator has no essential advantage over an electron-tube weak-oscillation generator. Orig. art. has: 4 figures and 4 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut svyazi im. M. A. Bonch-Bruyevicha (Leningrad Electrotechnical Institute of Communications); Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnic Institute)

SUBMITTED: 25Apr63

ENCL: 00

SVB CODE: EG, WP NO REF SOV: 003

OTHER: 001

Card 2/2

KUSHNIR, V.F.

Recommendations of the Department of Theoretical Radio Engineering
of the M.A. Bonch-Bruevich Electrical Communications Institute in
Leningrad. Izv. vys. ucheb. zav.; radiotekh. & no.4:508 Jl-Ag
'61. (MIRA 14:11)

1. Sekretar' kafedry teoreticheskoy radiotekhniki Leningradskogo
elektrotekhnicheskogo instituta svyazi imeni M.A.Bonch-Bruevicha.
(Radio)

KUSHNIK, V.F.; YUROVSKIY, A.V.; MIKOLAYEVA, T.T.; ZALIZNIY, A.M.,
red.

[Tables and formulas of V.K.Turkin functions

$T_m^{(1)}(x, \alpha) = \sum_{n=-\infty}^{\infty} \frac{J_n(x) T_{n-m}^{(\alpha)}}{n - \alpha}$; a manual] Tablitsy i
formuly funktsii V.K.Turkina, $T_m^{(1)}(x, \alpha) = \sum_{n=-\infty}^{\infty} \frac{J_n(x) T_{n-m}^{(\alpha)}}{n - \alpha}$;

uchebnoe posobie. Leningrad, 1963.

(MIA 17:9)

89 p.

1. Leningrad. Elektrotehnicheskiy institut svyazi.

L 19699-63 BDS
ACCESSION NR: AP3006456

S/0109/63/008/009/1542/1544

X B

AUTHOR: Kushnir, V. F.

TITLE: Theory of parametric systems of the first order

SOURCE: Radiotekhnika i elektronika, v. 8, no. 9, 1963, 1542-1544

TOPIC TAGS: first-order parametric system, parametric system

ABSTRACT: By using a simple circuit containing R and parametric C as an example, a new formula is developed that describes the sustained current in the circuit with a harmonic voltage applied to it. In terms of special functions suggested by V. K. Turkin (Dokl. AN SSSR, 1956, 106, 6, 999) the current complex amplitude is

$$I_x = \frac{U}{R} j^k \frac{\omega + k\omega_n}{\omega_n} T_n^{(k)}(x, \alpha).$$

"The author extends his thanks to V. K. Turkin and A. M. Zayezdnyy for their attention to the work." Orig. art. has: 1 figure and 21 formulas.

Card 1/2

L 19699-63

ACCESSION NR: AP3006456

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut svyazi im. M. A. Bonch-Bruyevicha (Leningrad Electrotechnical Institute of Communications)

SUBMITTED: 28Jul62

DATE ACQ: 30Sep63

ENCL: 00

SUB CODE: GE

NO REF SOV: 004

OTHER: 000

Card 2/2

KUSHNIR, V. G.

Tables of calculations of the results of chemical analysis of steel and cast iron.

Moskva, Gos. nauch. -tekhn. izd-vo mashinostroit. lit-ry, 1949.
118 p. (50-16570)

QD133.K9

ZAYEZDNYY, A.M.; KUSHNIR, V.F.; RANN, G.S., otv. red.; GAL'CHINSKAYA,
V.V., tekhn. red.

[Parametric systems; outline of lectures on the course
"Theoretical radio engineering."] Parametricheskie sistemy;
konспект lektsii iz kursa "Teoreticheskaya radiotekhnika."
Leningrad, Leningr. elektrotekhn. in-t sviazi, 1962. 110 p.
(MIRA 17:3)

KUSHNIR, G.T., elektroobmotchik; KUSHNIR, V.G., elektroobmotchik

Sealing of the bearing setting in the covers of electric motors
using an electric spark method. Energetik 13 no.1:29 Ja '65.
(MIRA 18:3)

L 36111-66 EWT(1)/EWT(m)/EWP(k)/T/EWP(t)/ETL LIP(c) JD/JH
ACC NR: AP6017306 (N) SOURCE CODE: UR/0126/66/021/005/0727/0731

AUTHORS: Polotskiy, I. G.; Ovsyonko, D. Ye.; Khodov, Z. L.; Sosnina, Ye. I.; Panaiyuk, G. Ya.; Kushnir, V. K.

ORG: Institute of Metal Physics AN UkrSSR (Institut metallofiziki Ak. UkrSSR)

TYPE: Influence of ultrasound on the degree of perfection of single crystals of aluminum, grown from the melt

SOURCE: Fizika metallov i metallovedeniya, v. 21, no. 5, 1966, 727-731

TOPIC TAGS: aluminum, metal crystal, metal crystallization, ultrasonic effect, ultrasonic irradiation, single crystal

ABSTRACT: The effect of an ultrasonic field on the degree of perfection of aluminum crystals grown from the melt was studied. The study supplements the results of A. Langeneker (Phys. Rev. Letters, 1965, 14, 221). The experimental procedure consisted of subjecting a crystallizing aluminum melt to the action of an ultrasonic field (see Fig. 1). The structure of single crystals of aluminum derived from the melt with and without the action of the ultrasonic field was studied by means of double x-ray reflection (Ye. I. Sosnina, L. I. Meloshko, and D. Ye. Ovsyonko, Zailezovaniye nesovershenstv kristallicheskogo stroyeniya, Kiyev, Izd. Nauchnaya Promst', 1965, str. 122) and by sound absorption and etching techniques. The experimental results are presented graphically (see Fig. 2). The application of an ultrasonic

Cord 1/2 .

UDC: 669.172:621.7892:516.621

L 36111-66

ACC NR: A6017306

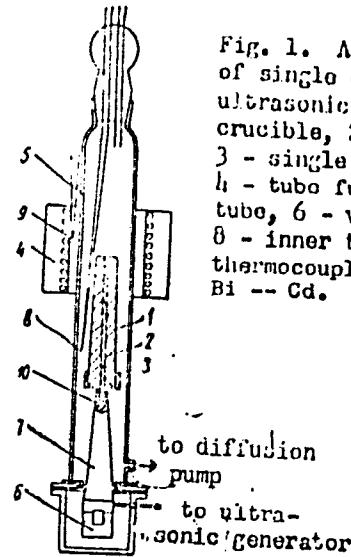


Fig. 1. Apparatus for growth of single crystals in an ultrasonic field. 1 - graphite crucible, 2 - metal stock, 3 - single crystalline seed, 4 - tube furnace, 5 - quartz tube, 6 - vibrator, 7 - concentrator, 8 - inner thermocouple, 9 - outer thermocouple, 10 - molten eutectic Bi -- Cd.

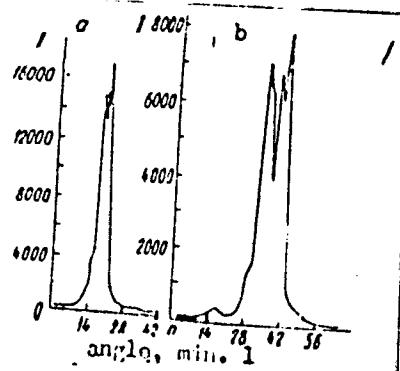


Fig. 2. Curves for double reflection from a single crystal of aluminum. a - before ultrasonic treatment; b - after ultrasonic treatment in the solid phase.

field to a growing aluminum crystal causes a considerable disorientation of the subgrains in the latter. It is suggested that the disorientation effect is caused by the tensions created by the ultrasonic field in the growing crystals. Orig. art. SUB.CONS: 20, 115 Card 272 SUBM DATE: 19Jul65/ ORIG REF: 004/ OTH REF: 002

L 10055-67

ACC NR: AP6022909

SOURCE CODE: UR/0292/66/000/004/0045/0048

21

AUTHOR: Kushnir, V. M. (Engineer)

ORG: none

TITLE: Effect of temperature on the threshold of operation of contactless magnetic relays

SOURCE: Elektrotehnika, no. 4, 1966, 45-48

TOPIC TAGS: electric relay, magnetic relay, gate relay, *magnetic amplifier*

ABSTRACT: The operation of a single-phase self-saturating magnetic amplifier employed as a contactless magnetic relay is considered; such a relay may have either a d-c or an a-c output. Its functioning is regarded as a joint operation of two self-saturating amplifier units having a positive feedback. With certain simplifying assumptions, a formula is deduced which permits calculating the

Card 1/2

UDC: 621.318.57.001.2

L 10055-67

ACC NR: AP6022909

operation threshold under various temperatures provided the supply voltage, semiconductor-diode types, number of winding turns, and temperature variation of load and winding resistances are known. Experimentally verified with a TUMA-1-11 magnetic amplifier, the formula yielded values differing from the experimental by 7-10%. Orig. art. has: 3 figures and 11 formulas.

10/
SUB CODE: 09 / SUBM DATE: none / ORIG REF: 005

Card 2/2

GERSHUN, N.O., inzh.; KUSHNIR, V.M., inzh.

Economic effectiveness of shoe assembly without lacing.
Izv.vys.ucheb.zav.; tekhn.leg.prom. no.2:3-6 '60.
(MIRA 13:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-
obuvnoy promyshlennosti.
(Shoe manufacture)

PROTSAY, F.I., inzh.; KUSHNIR, V.P., inzh.

Selection of efficient operating conditions and productive capacity of hydraulic mines. Trudy VNIIGidrouglia no.2:
104-110 '63. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

L 00314-66 EWT(1)/EWP(m)/EFF(n)-2/EWG(m)/EWA(d)/EPA(w)-2/FC3(k)/EWA(1)
ACCESSION NR: AP5016654 IJP(c) AT UR/0382/65/000/002/0067/0079
533.95 : 538.4

AUTHOR: Kushnir, V. S.; Novikov, I. I.; Pichakhchi, L. D.; Fokin, V. N.

TITLE: Theoretical and experimental investigation of self-excitation regimes
during the interaction of a traveling magnetic field with the flow of ionized
gas

SOURCE: Magnitnaya gidrodinamika, no. 2, 1965, 67-79

TOPIC TAGS: MHD flow, transmission line, traveling wave interaction

ABSTRACT: Study of the interaction between the plasma stream and the transverse magnetic field of the traveling wave moving in an artificial transmission line with localized inductances and capacities is reported. Transmission line theory is adapted with proper simplifications to computation of amplification coefficient, useful power delivered to a resistive load, electrical efficiency and the magnitude of the positive feedback occurring in the self-excitation regime. Both leakage flux and finite ratio of channel width to the characteristic wavelength are taken into account. The computational results were checked with the experi-

Card 1/2

L 00314-66
ACCESSION NR: AP5016654

3

ment performed on a specially constructed test apparatus. The amplification coefficient and other parameters were measured for copper, aluminum and steel discs which simulated the plasma. Orig. art. has: 42 formulas, 5 figures.

ASSOCIATION: none

21.41.55

SUBMITTED: 27Jan65

ENCL: 00

SUB CODE: EM, ME

NO REF SOV: 000

OTHER: 000

Card 2/2

L 24115-66 EWT(1)/EWP(m)/EWA(d)/ETC(m)-6/EWA(1) IJP(c) WW

ACC NR: AP6011518

SOURCE CODE: UR/C382/66/000/001/0109/0115

AUTHOR: Kushnir, V. S.; Morozova, N. M.; Pichakhchi, L. D.

ORG: none

TITLE: The effect of busbars on the current interaction of conducting fluid flow...
with the traveling wave magnetic field

SOURCE: Magnitnaya gidrodinamika, no. 1, 1966, 109-115

TOPIC TAGS: electroconductive fluid, electromagnetic field, magnetic effect,
traveling wave, wave function, traveling wave interaction, electric inductance

ABSTRACT: An analysis has been made of the effect of electroconducting busbars on
the current interaction of conducting fluid flow with the traveling wave magnetic field
created by a long line of concentrated inductances and capacitances. An ex-
pression for the amplification coefficient as a function of the ratio of busbar
thickness and duct width to the wavelength was obtained. The inclusion of busbars
increases the amplification coefficient. Orig. art. has: 4 figures and 22 formulas.
[Based on authors' abstract]

SUB CODE: 20/ SUBM DATE/21Sep65/ ORIG REF: 002/

Card 1/1 *See*

UDC: 538.4

73

8

2

KUSHNIR, V.Ye.

Action of hexonium preparations on the peptic activity of the gastric contents. Vrach.delo no.5:533 My '60. (MIP 13;11)

1. Kafedra terapii (zav. - dotsent Ye.I.Likhtenshteyn) sanitarno-gigiyenicheskogo fakul'teta Kiyevskogo meditsinskogo instituta i Kiyevskaya tsentral'naya kurortnaya poliklinika.

(AMMONIUM COMPOUNDS--PHYSIOLOGICAL EFFECT)
(STOMACH--SECRECTIONS)

BEZOBCHUK, K.M.; KUSHNIR, V.Ye.

First Republic Conference of Physical Therapists and Health Resort
Specialists of the Ukrainian S.S.R. Vop. kur. fizioter. i lech.
fiz. kul't. 25 no. 3:271-276 My-Je '60. (MIRA 14:4)
(UKRAINE—PHYSICAL THERAPY—CONGRESSES)

KUSHNIR, V.Ye; (Kiyev)

Effect of hexonium preparations on some gastric functions in patients
with ulcers and gastritis. Vrach. delo no.11:15-20 N '61.

(MIRA 14:11)

(STOMACH--DISEASES)

(HEXOMIUM)

KUSHNIR, V.Ye. (Kiyev)

Method for using benzohexonium in treating peptic ulcer. Vrach.
delo no.8:85-92 Ag '62. (MIRA 15:11)

1. Kiyevskaya kurortnaya poliklinika; nauchnyy rukovoditel'
raboty - prof. G.I.Burchinskiy.
(PEPTIC ULCER) (HEXONIUM)

L 47323..66	EWT(1)/EWT(m)/ ¹ /EWF(c)/ETI	IWP(s)	JD/GP
ACC NR:	AR6025750	SOURCE CODE:	UR/0058/66/000/004/A074/A074
AUTHOR:	<u>Kotsyumakha, P. A.</u> ; <u>Kushnir, Ya. I.</u> ; <u>Likhobabin, N. P.</u> ✓1 ✓1 38		
TITLE:	On the mechanism of growth of single crystals of cuprous oxide 8		
SOURCE:	Ref. zh. Fizika, Abs. 4A618.		
REF SOURCE:	Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 15		
TOPIC TAGS: single crystal growing, cuprous oxide, annealing, temperature dependence			
ABSTRACT: Single crystals of Cu ₂ O of large size (up to 0.6 mm thick and ~40 cm ² in area) are obtained from polycrystalline Cu ₂ O as a result of using additional high temperature annealing (1080 - 1110°C). The rate of growth and the final dimensions of the single crystals depend on the purity and thickness of the plates of the initial Cu, on the temperature conditions of oxidation and high-temperature annealing, and also on the temperature gradient along the sample during the annealing time. The growth of Cu ₂ O single crystals at increased annealing temperature proceeds not by usual recrystallization, but is analogous to some degree to the growth of single crystals by the Bridgeman-Stockbarger method, in that the recrystallization occurs in the liquid phase of the substance of the intermediate layer and of the linings between crystals under the influence of the temperature gradient. [Translation of abstract]			
SUB CODE: 20			
Card	1/1	RJS	

BURD, V.S.; SHTERBERG, P.M.; KIRKOPULO, L. Ye.; TANIN, V.G.; KUSHNIR,
Ya.I.

Selecting operating parameters for vineyard sprayers. Zashch.
rast. ot vred. i bol. 9 no.10:30-32 '64 (MIRA 18:1)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro
L'vovskogo soveta narodnogo khozyaystva i Institut vinogra-
darstva i vinodeliya imeni Tairova.

KUSHNIR, Ya.I., agronom; KHOKHOL, N.F. (Kiyev)

Responses to our articles. Zashch. rast. ot vred. i bol.
6 no.8:9 Ag '61. (MIRA 15:12)

1. Gosudarstvennoye spetsial'noye konstruktorskoye
byuro L'vovskogo soveta narodnogo khozyaystva (for Kushnir).
(Spraying and dusting equipment)

L 6811-65 EAU(j)/EWT(i)/ENG(k)/EWT(m)/EPF(e)/EPR/T/EAT(q)/EWP(b) Pr-L/
Pr-i/Pr-g LJP(c)/ASD(e)-5/AFETR/RADK(t) AT/JD

ACCESSION NR: AP4044048

8/0648/64/028/008/1328/1330

AUTHOR: Kotyukhova, P.A.; Kushnir, Ya.I.; Perelegin, A.V.

73

TITLE: Temperature dependence of the electric conductivity²¹ of and the Hall effect
in cuprous oxide /Report, Third All-Union Conference on Semiconductor Compounds
held in Kishinev 16-21 Sept 1963/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.8, 1964, 1328-1330

TOPIC TAGS: cuprous oxide, electric conductivity, Hall constant

ABSTRACT: The electric conductivity and Hall constant of cuprous oxide were measured on both single crystals and polycrystalline samples at temperatures from 20 to 1070°C. The single crystals were obtained by complete oxidation of copper followed by a high temperature anneal, as described by R.S. Toth, R.Kilkson and D.J. Trivich (J.Appl.Phys.31,6,117,1960). The 20 x 2 x 0.4 mm³ specimen was mounted in a quartz tube inserted into an electric furnace, which maintained the set temperature within ±0.2°; the oxygen pressure was varied between 10⁻⁵ and 10⁻² mm Hg. A magnetic field of 10 kOe was employed. Results of the measurements are presented graphically for four specimens, two single crystals with carrier concentrations (at room

1/3

L 6811-45

ACCESSION NR: AP4044348

temperature) of 1×10^{12} and $6.85 \times 10^{12} \text{ cm}^{-3}$, and two polycrystalline specimens with carrier concentrations of 2×10^{13} and $4 \times 10^{14} \text{ cm}^{-3}$. The rapid decrease of the Hall constant with increasing temperature was found to set in at lower temperatures for the materials with the lower carrier concentrations. The temperature at which the Hall constant drops to zero was found by extrapolation to range from 320 to 640°C for the four samples discussed. The temperature dependence of the conductivity indicated well defined regions of intrinsic and extrinsic conductivity. The activation energy in the intrinsic region was 0.84 eV for the polycrystalline materials and between 1.03 and 1.12 eV for the single crystals. The resistivity-temperature curves for the single crystals were somewhat anomalous in the transition region between intrinsic and extrinsic conductivity, and for one of the single crystals there was a small temperature range in which the conductivity increased with decreasing temperature. The Hall constant versus temperature curves for the single crystals were also somewhat anomalous in the same temperature region. The polycrystalline materials did not exhibit these anomalies. The anomalies are ascribed to an impurity band due to the concentration of excess oxygen in the surface layers of the crystal. Conductivity and Hall constant measurements on single cuprous oxide crystals that have been annealed under different conditions are promised for the future.

Orig.art.has: 1 formula and 3 figures.

2/3

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000927830002-0

L 6811-65

ACCESSION NR: AP4044648

ASSOCIATION: none

SUMMITTED: 00

ENCL: 00

SUB CODE: 08, EM

NR REF BOV: 004

OTHER: 008

3/3

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000927830002-0"

All rights reserved. V.C. A.
KUSHNIR, Ye.A.

L. Euler's solution of ordinary difference equations with variable coefficients by the method of definite integrals. Ist.-mat. issl. no.10:363-370 '57.
(MIRA 11:1)
(Difference equations)

KUSHNIR, Ye.A., dots., MIL'KO, V.I.. (Kiyev)

Work of the staff of a medical institute in assisting public health agencies. Vrach. delo no.8:849-851 Ag '58 (MIRA 11:8)
(UKRAINE--MEDICINE)

BEZOBCHUK, Kondrat Makarovich; KUSHNIR, Ye.A., red.; LOKHMATYY, Ye.G.,
tekhred.

[Use of mineral waters in combination with diet outside of a health
resort] Vnekurortnoe primenie lechebnykh mineral'nykh vod v so-
chetanii s lechebnym pitaniem. Kiev, Gos.med.izd-vo USSR, 1959.
(MIRA 13:12)

143 p.

(MINERAL WATERS)

(DIET IN DISEASE)

KUSHNIR, Yu.I., mokhanik

Repairing roller bearings, bobs, and gear boxes. Mekh. sil'.
hosp. 9 no.10:14-15 O '58. (MIRA 11:10)

1. Brovarskaya remontno-traktornaya stantsiya, Kiyevskoy oblasti.
(Tractors--Maintenance and repair)

ca

3

Secondary electron emission under the action of two electron beams. Yu. M. Kushtig and V. I. Milyutin
J. Tech. Phys. (U.S.S.R.) 9, 267-70 (1969). Ag,
Ag₂O and Ag-Ag₂O-Ca cathodes were simultaneously
bombarded by 2 electron beams of different velocities.
The intensity of the secondary emission showed that the
effect of both beams was additive for the Ag and slightly
less than additive for the other cathodes. L. L. B.

ASO SLA METALLURGICAL LITERATURE CLASSIFICATION

Secondary emission of electrons from mercury. Yu. M. Kudinov, V. I. Milyutin and V. P. Goncharov. *J. Tech. Phys. (U. S. S. R.)*, 19, 1599-01 (1959).--The secondary emission of liquid Hg at 5° is identical with that of solid Hg at -80 and -100°. Air shifts the max. of emission from 700 to 400 e. v. J. I. Bikerman.

ASH SLA METALLURGICAL LITERATURE CLASSIFICATION

11
4

Difference of contact potentials between oxygen cesium surface and silver. Yu. M. Kuznetsov, R. A. Vulinov, and V. P. Goncharov. *J. Tech. Phys. (U. S. S. R.)* 9, 2044 (1959).--The photocurrent between a Ag-Cu₃O-Cs, Ag-Cs cathode and a Ag anode coated with soot and Cs was studied for various applied voltages and wave lengths. From the data obtained the sum of the p. d. and the work function was calculated; it was 3.3 v. From the threshold the work function was found to be 0.74 v.
J. J. Bikerman

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

Energy distribution of photoelectrons. I. Oxygen
silver-sodium cathode. Yu. M. Kuchnir, R. A. Valinov
and V. P. Oncharov. *J. Tech. Phys.* (U. S. S. R.) 9,
21-39-40 (1939). - Current-voltage curves of 3 cathodes
were drawn for various wave lengths λ . When the inten-
sity of irradiation is adjusted so as to make the current
strength at zero voltage independent of the λ , the curves appear
to be shifted to higher voltages when λ increases from 3000 Å
to 10,000 Å. For the explanation it is suggested that,
with increasing λ , the relative no. of electrons which can
not leave the cathode without an external field rises as
also does the intensity of the external field required.
J. J. Bikerman

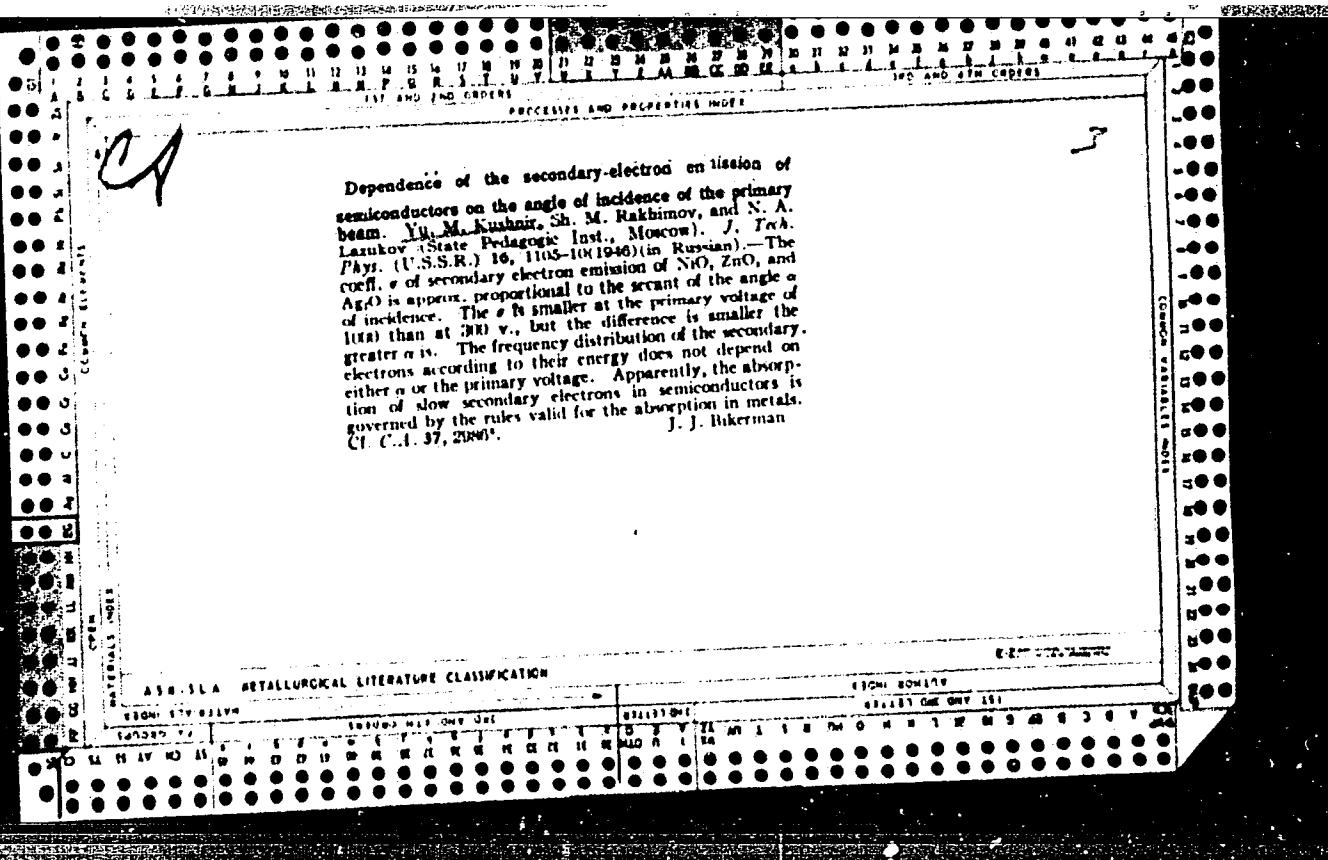
3

AYR SLA METALLURGICAL LITERATURE CLASSIFICATION

БУСАДА, Ю. А., СИР, & ПАНЧИН, В. Г., "Some

"New Method of Utilizing Photocells in Automatik and Telemechanics."

Avtomatika i Telemekhanika, vol 6, no. 4-5, 1951.



USSR/Electricity Microscopes, Electron Optics, Electronic -	MAY 1947
"Physical Technical Fundamentals of the Electron Microscope," Yu. M. Kushnir, Candidate of Physical Mathematical Sciences, 14 pp	
"Elektrichesvo" No 5	
Developments in electronics gave rise to a new field--electronic optics. Article describes basic experimental and theoretical prerequisites for electron microscopes. Discusses several aspects of the microscope: electronic waves, the rise of electronic optics, magnetic and electrostatic lenses with high refractivity	40715
ID	
USSR/Electricity (Contd)	MAY 1947
and the deficiencies of electron lenses. States the basic system of an electron microscope. Author hopes to publish soon an article explaining electrical circuits, and operation of the electron microscope.	40715

PA 2788

USSR/Microscopes, Electron
Optics, Electronic

Jul 1947

"Construction and Use of Electron Microscopes,"
Yu. M. Kushmir, 15 pp

"Elektrichestvo" Vol LXVII, No 7

Discusses the construction of the main types of
magnets and electric microscopes operating on an
aperture. Brief description is given of electric
feeding methods, and of fixing electro-microscope
preparations. Brief review of results. Il-
lustrated with micro-photographs.

17T88

Single-Step Quartz Replica for Electron-Microscopic Investigation. (In Russian.) L. I. Zenlyanova, Ya. M. Kugnur, and A. I. Frimer. Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), new ser., v. 70, Feb. 21, 1950, p. 601-603.
Describes method of the production of the above used for different metal specimens. The technique of replica formation for several specific steels and non-ferrous metals and alloys is indicated. Advantages of this type of replica are emphasized. Illustrated.

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ASA-1A METALLURGICAL LITERATURE CLASSIFICATION

RIGHT SIDE

LAST ONE ON 151

KUSHNIR, Yu. M.

USSR/Electronics - Electron Microscope

Apr 51

"Electron Microscopy," Yu. M. Kushnir

"Nauka i Zhizn'" Vol XVIII No 4, pp 17-19

First Soviet electron microscope of 50 kv was constructed in 1946 by Acad A. A. Lebedev, V. N. Vertner and N. G. Zandin, all awarded Stalin Prize. Much progress has been achieved since, modern Soviet electron microscopes operate on 100 kv by translucency, reflection and emission. Small-size instruments of electrostatic or electromagnetic type are already available. Mass production is under way.

213749

KUSHNIK, YU. M.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 508 - I

Call No.: QH211.K8

BOOK

Author: KUSHNIR, YU. M., Kand. of Phys.-Math. Sci.

Full Title: SOVIET ELECTRON MICROSCOPY

Transliterated Title: Sovetskaya elektronnaya mikroskopiya

PUBLISHING DATA

Originating Agency: All-Union Society for the Propagation of Political
and Scientific Knowledge (Vsesoyuznoye obshchestvo po rasprostra-
neniyu politicheskikh i nauchnykh znanii)

Publishing House: "Znaniye" (Knowledge)

Date: 1952 No. pp.: 32 No. of copies: 65,000

Editorial Staff

Editor: Milyutin, V. I.

TEXT DATA

Coverage: This is a stenographic report of a public lecture delivered at the Central Lecture Bureau of the All-Union Society for the Propagation of Political and Scientific Knowledge in Moscow. The lecturer gives a general survey of practical electron microscopy, its advantages and fields of application, and briefly describes several types of Soviet electron microscopes. The outward appearance of four such microscopes is shown in Figs. 6-8.

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Sovetskaya elektronnaya mikroskopiya

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Basic Systems of Electron Microscopes	15
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Purpose: To provide information on fundamentals of electron microscopy and the evolution and application of Soviet microscopes.

Facilities: None

No. of Russian and Slavic References: None

Available: Library of Congress.

2/2

KUSHNIR, Yu. M.

Nevidimye luchi [Invisible rays]. Moskva, Voenizdat, 1952. 88 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 5, August 1953

KUSHNIR, Yu. M. and ZEMLYANOVA, L. I.

"Application of the Electron Microscope for Microcrystalllochemical Analysis,"
Zavodskaya Laboratoriya, No 8, 1952, pp 972-975.

KUSHNIR, Yu.M.; AMISTOV, G.A.; CHENTSOV, R.A. [authors]; KUZNETSOV, V.A., inzhener-
~~kapitan~~ [reviewer].

Shortcomings of three booklets ("Soviet electronic microscopy" Iu.M.Kushnir; "For a materialistic world outlook in astronomy," G.A.Aristov; "Physics of low temperatures," R.A.Chentsov. Reviewed by V.A.Kuznetsov). Nauka i zhizn' 20 no.7:47-48 J1 '53. (MLRA 6:7)
(Science---Bibliography) (Kushnir, Iu.M.) (Chentsov, R.A.)
(Aristov, G.A.)

KUSANTR, Jr., M.

400

V Electron-optical investigation of composite photocathodes
L. N. Kuzantr and V. M. Lashin. Zdrav. Fiz.,
Fig. 25, 1777 (1955). *PL* and $\text{Cs}_2\text{O}\text{-Ag}$
cathodes have investigated in tubes with movable anode
(which could be removed for the introduction of an evaporator);
the tubes had a fluorescent screen and electromagnetic focusing. The magnification was 50-100 times, the
resolution 1.7-2.0 μ , the anode voltage 0.45 kV, the field
strength at the cathode 15-20 kV/cm. The $\text{Cs}_2\text{O}\text{-Ag}$
cathodes were made both on evap'd Ag and on Ag plates.
The cathodes were illuminated with ultraviolet and visible
light of different wave lengths; their photoelectron sensitivity
was 60 microamps./lumen for Sb-Cs , 15 microamps./lumen
for Bi-Cs , and 29 microamps./lumen for $\text{Cs}_2\text{O}\text{-Ag}$ cathodes.
The cathodes could also be examined with an optical microscope
of 40-500 times magnification. It could be shown
that the dissipation of sensitivity in Sb-Cs and Bi-Cs
cathodes depends on the speed of evap. of Sb and Bi and
on the thickness, the greatest speed giving the best uniformity.
Considerable nonuniformity was observed on $\text{Cs}_2\text{O}\text{-Ag}$
cathodes with Ag evap'd to 10-20% transparency.
The nonuniformity of these latter cathodes was more pronounced
with long-wave light, showing a difference in work
function along the surface of the cathode. Adm. evap'd of
Ag made the surface more uniform in emission. Cathodes
made on mica sheets and Ag plates were uniform. Cathodes
made on different crystal faces of Ag had different work
functions due to iniquities in evap'n. S. P. [unclear]

KUSHNIR, Yu. M.

AUTHOR:

Zemlyanova, L.I., Kushnir, Yu.M.

32-9-16/43

TITLE:

The Use of an Electron Microscope for Microchemical Analysis
(Primeneniye elektronnogo mikroskopov dlya mikrokhimicheskogo analiza)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 9, pp. 1083-1087 (USSR)

ABSTRACT:

This is a continuation of the work published in Zavodskaya Laboratoriya, 1952, Vol. 18, Nr 8. The present paper deals with the application of the electron-microcrystalllochemical analysis for the investigation of ions in cobalt, zinc, cadmium, magnesium and of sulphate ions. Besides, the method for determining the enumerated ions when found together in the solution, as well as the method of determining small admixtures of ions in concentrated zinc- and cadmium salt solutions is described. The direct and indirect methods of investigating microcrystals are combined, and a method for the electron-microcrystalllochemical analysis of the solid phase in multicomponent alloys is worked out. The most successful method of separating the substance is that in which the shape of the crystal is examined immediately on the film. This method is based upon the diffusion of the ions by the film pores. In order to determine the cobalt ions, a solution of citric acid and its salts, for determining zinc ions, anthranilic acid, for cadmium ions

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The Use of an Electron Microscope for Microchemical Analysis

32-9-16/43

- potassium hexacyanoferrate solution, for determining magnesium ions - a sodium hydrophosphate solution saturated with cesium chloride was used. Electromographical investigations were carried out with an electron microscope UEM-100, which operated as an electrophograph, and with the electromograph EG-100. There are 8 figures and 2 tables.

AVAILABLE: Library of Congress

Card 2/2

NIKIKOV, V. G., KUSHNIR, Yu. M., BUTSLOV, M. M. and BORDOVSKIY, G.
Institute for Electronic Optics of the State Committee for Radio Electronics, Moscow

"Use of an Image Amplifier for Increasing the Distinctness of the Image in an
Electron Microscope."

report presented at 4th Intl. Conference on Electron Microscopy, Berlin GFR,
10 - 17 Sept 1958.

DER-SHVARTS, G. V. and KUSHNIR, Yu. M.

Institute of Electronic Optics of the State Committee for Radio-Electronics, Moscow.

"Concerning Some Problems of the Reflection Microscope."

report presented at 4th. Instl. Conference on Electron Microscopy, Berlin GFR,
10 - 17 Sep 1958.

KUSHNIR, Yu.: BORDOVSKI, G.: KRASOVSKI, V.

"Investigation of the corpuscular radiation of the sun by means of the artificial earth satellite. Tr. from the Russian"

Fiziko-Matematicheskoe Spisanie. Sofia, Bulgaria. Vol. 1, no. 1/2 1958

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclassified

KRASOVSKIY, V.I.; KUSHNIR, Yu.M.; BORDOVSKIY, G.A.; ZAKHAROV, G.F.;
SVETLITSKIY, Ye.M.

Detection of corpuscles by the third artificial earth satellite.
Isk.sput.Zem. no.2:59-60 '58. (MIRA 12:5)
(Artificial satellites)
(Solar radiation--Observations)